

IN THE SPECIFICATION:

Delete the section on page 1, lines 4-7 entitled "CROSS REFERENCE TO RELATED APPLICATIONS" and replace the deleted section with the following replacement section:

"CROSS REFERENCE TO RELATED APPLICATIONS"

a¹ This application is related to co-pending US patent application entitled "System and Method for Scanner Calibration" assigned Serial Number 09/855,211 and filed on even date herewith (~~Attorney Docket Number 10002964~~)."

Delete the paragraph located on page 6, lines 4-18 and replace the deleted paragraph with the following replacement paragraph:

a² "The scanner 100 includes various components that are stored on the memory 106 and executable by the processor 103 in performing the functionality of the scanner 100. In particular, stored on the memory 106 is an operating system 143 and a scanner control system 146. The scanner control system 146 includes scanner calibration logic 149 and a sensor validity table 153. The operating system 143 is executed to control the allocation and usage of hardware resources in the scanner. Specifically, the operating system 143 controls the allocation and usage of the memory 106 and processing time, etc. The scanner control system 146 is executed by the processor 103 ~~406~~ to control the general operation of the scanner 100. In particular, the scanner control system 146 controls the activation of the drive motors 124, light sources 125, and other aspects of the scanner 100. According to an aspect of the present invention, the scanner calibration logic 149 is executed by the processor 103 to perform the calibration of the scanner 100. The specific details of the scanner calibration logic 149 are discussed in detail in the figures that follow."

Delete the paragraph located on page 13, line 32 to page 14, line 4 and replace the deleted paragraph with the following replacement paragraph:

a3 "Alternatively, a different approach in which the currents applied to the sensors 131 are decremented may be employed. For example, initially in block 284, the currents may be set to a maximum ~~minimum~~ and the unset currents may be decremented in block 288. In such case, in block 296, the current subroutine 206 would detect a predefined percent decrease that indicates the saturation point of the sensors 131 has been reached."

Delete the paragraph located on page 14, lines 18-31 and replace the deleted paragraph with the following replacement paragraph:

G4 "Next, in block 322, a scan of the sensors 131 ~~429~~ is performed at the maximum exposure time and an initial set of sensor values obtained therefrom is stored in the memory 106 (FIG. 1). Then, in block 324, any of the sensors that produce sensor values that are less than a predetermined minimum threshold are disqualified from further operation in the sensor validity table 153 (FIG. 1). This is because at the maximum exposure time, all of the sensors 131 within the sensor array 129 should produce sensor values of appreciable magnitude. Those sensors 131 that do not produce such a sensor value are presumed to be malfunctioning. Next, in block 326 the exposure time is reduced by a predetermined value. Thereafter, in block 328 another scan of the sensors 131 is performed and the sensor values obtained therefrom are stored in the memory 106. Then, in block 330 a loop is executed for each of the sensors 131. Thereafter in block 332, the most recent sensor value obtained for the current sensor 131 ~~424~~ is compared with the second most recent sensor value obtained from the same sensor 131."

Delete the paragraph located on page 15, lines 12-26 and replace the deleted paragraph with the following replacement paragraph:

a5 "However, if in block 340 it is determined that the last pair of sensor values has been analyzed, then the saturation subroutine 209 proceeds to block 344. In block 344 it is determined whether the final saturation levels have been determined for all of the sensors 131 in the sensor array 129 or if minimum exposure time values have been reached. The final saturation levels are determined when the second most recent sensor values are stored as the saturation levels in block 338. This is because a subsequent sensor reading at a lower exposure time did not change the saturation level itself. The minimum exposure time detected in block 344 is a predetermined value that is ascertained based upon what should be a minimum exposure time for the saturation levels to be obtained by the sensors 131. If either condition is true in block 344, then the saturation subroutine 209 ends. However, if not, then the saturation subroutine 209 reverts back to block 326. Thus, the saturation subroutine 209 obtains an estimate of the exposure time at which each of the sensors 131 ~~429~~ is saturated for each individual color. This information is employed to obtain the optimum exposure time as will be discussed."

Delete the paragraph located on page 16, lines ~~9-17~~ and replace the deleted paragraph with the following replacement paragraph:

a6 "Thereafter the exposure time subroutine 213 proceeds to block 364 in which a first sensor value is identified among the sensor values stored in block 362. In block 366 the current sensor value identified is compared with the sensor saturation level for the particular sensor for the corresponding color. Then, in block 368 it is determined whether the sensor value is less than the sensor saturation level by at least a predetermined amount. This threshold ~~The predetermined amount~~ may be, for example, 85% ~~fifteen percent~~ of the sensor saturation level or other number as is appropriate. If such is the case, then the exposure time subroutine 213 proceeds to block 370. Otherwise, the exposure time subroutine 213 proceeds to block 372."

Delete the paragraph located on pages 20, line 25 to page 21, line 2 and replace the deleted paragraph with the following replacement paragraph:

a2 "In block 438 the analog verification subroutine 226 determines whether any of the sensor values obtained in block 432 have been "clipped low" such that they fall above the upper limit of the output of the A/D converter 166. This condition exists if the highest value generated at the output of the A/D converter 166 is seen for a particular sensor value. If not, then the analog verification subroutine 226 skips to block 440. Otherwise the analog verification subroutine 226 proceeds to block 442. In block 442, the analog offset 159 is decreased by a predetermined amount that presumably causes any valid sensors that have been clipped low with respective block ~~look~~ 438 to fall within the operating range of the A/D converter 166.

Thereafter, in block 444, the analog gain 163 is reduced by a predetermined amount such as, for example, 5% or other percentage of the original analog gain 163."